



# p62 – p122 USER MANUAL

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# PRESENTATION

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Thank you for choosing a dot marking system (also called micro-percussion) for your marking applications.

SIC MARKING systems contribute to improve the tracability of your products while complying with the industrial standards.

We would like to welcome you as a user of our systems.

This guide contains the installation and use instructions of the dot marking type machines. We recommend that you read it carefully before installing the system.

Please contact our technical department for any further information.



# INSTALLATION AND START-UP

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## 1. UNPACKING

Except if we deliver the system, it is generally supplied in an appropriate packaging, which needs to be kept for any return of the material.

Remove the sub-systems carefully (controller, control handbox, possible options ...) from their packages.



The machine should only be lifted by the column and the base ; it should never be lifted by the head housing.  
Weight of the machine : 35 kg

## 2. INSTALLATION

### 2.1. Fastening

- ✓ Column-type machines
  - Install the machine on a rigid and stable support frame
  - After installing the entire marking machine, fasten the base with 2 M10 screws.
- ✓ Integrated-type machines
  - Install the machine on a rigid and stable support frame
  - Fasten the marking head onto the machine by complying with the indications of the integration plan, **available thread length 12 mm max.**
- ✓ Portable-type machines
  - No fastening : marking gun designed to be held manually

***Note : The integrated and portable type machines are designed to function in all positions (vertical, horizontal, stylus towards the bottom or the top)***

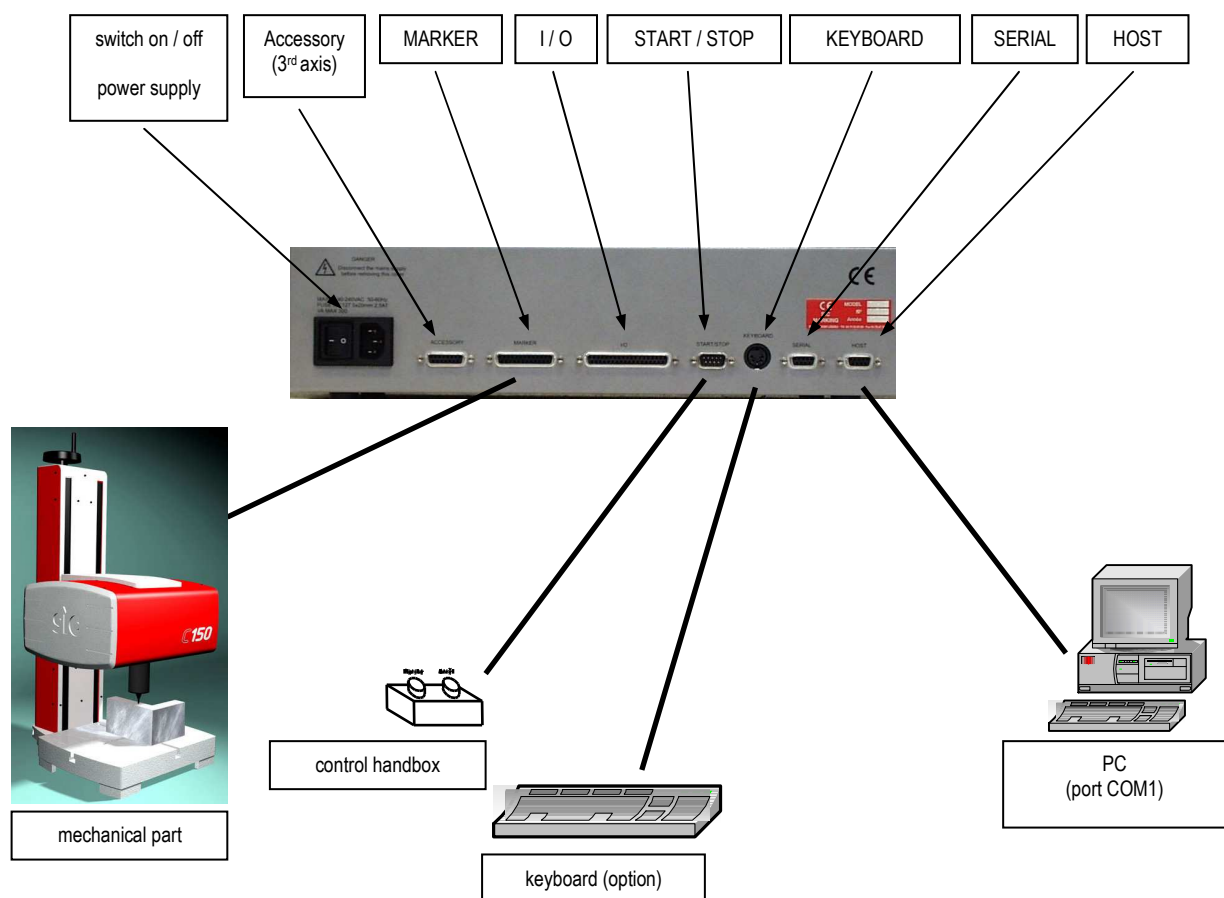
## 2.2. Connections

- Using the SUB-D 25 connector, connect the marking machine to the "marker" connector located at the rear of the controller. For the integrated type machines, proceed the same way using a connection cable.
- Correctly fasten the screws of the connector.

**Note :** *for more details about the connections, please check the controller manual.*



**Never unplug the controller when it is under tension as it may seriously damage the material.**





# USE OF THE MACHINE

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## 1. SAFETY



An intense use may cause the temperature of the system to rise up to 100°C.



It is recommended to wear safety glasses.



It is also recommended to wear a noise reducing helmet.

Acoustic value of the machine : 76 dB on a piece of steel at medium speed



The marking system should never be used without any surface to mark as the marking head may break.

## 2. CONTROLLER

See controller manual

## 3. SOFTWARE

See software manual

## 4. MARKING MACHINE

### 4.1. Positioning and clamping of the part to be marked

Even if the part is not submitted to high forces, it is necessary to immobilize it in order to reach an optimal marking quality.

Depending on the type of parts and the working conditions, the clamping system can vary from the simple manual fastening of the part against an angle iron (bracket) to the mechanical, magnetic or pneumatic fastening.

When using a marking gun, place the universal non-skid support against the surface to be marked and manually hold the gun during the marking.

The fastening device should maintain the part so that the stylus movements are parallel to the surface to be marked.

For the portable type machines, if the marking is always conducted on the same type of parts, we advise you to make a customized tooling to always keep the same marking position.

## 4.2. Machine adjustment

The marking quality highly depends on the part to be marked ; a smooth and flat surface is much easier to mark than a rough and irregular surface.

It is generally necessary to adapt the marking force to the height of the character. The smaller the character is, the lower the impact has to be to obtain a good legibility. The software also enables to choose various widths for the marking matrix.

To obtain a good marking quality, it is fundamental to adjust the force and the distance. When using marking guns, the distance between the stylus and the part can be modified by adjusting the position of the front plate.

For your information, hereafter are some values about the distance between the stylus and the part depending on the marking force :

Force	1	2	3	4	5	6	7	8	9
Minimum distance	0.5	0.5	0.5	1	1	2	3	5	6
Maximum distance	1	2	3	5	6	7	9	9	9

<b>Maximum distance between the stylus and the part : 9 mm</b>
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We recommend that you make trials before marking a new part.

## 4.3. Launch / Stop the marking

- Set the controller in marking mode (for more information, please see the software manual)

- Position the part to be marked
- Launch the marking by pressing the "Start" button on the control handbox or the "Marche" button on the gun handle (portable type machine)
- To stop the marking, press the "Stop" button on the control handbox or press the "Marche" button of the gun handle for more than 2 seconds.



# MAINTENANCE

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## ***1. INTRODUCTION***

Dot marking machines have been developed and realized especially to meet the needs of our clients who want a machine which is :

- Performing,
- Robust,
- Reliable,
- Ergonomic.

It requires very little maintenance and if you observe the preventive maintenance recommendations, you will *increase the life-expectancy* of your machine.

However, if a problem of any kind should occur, please refer to this manual, which will help you solve the problem.

## ***2. AFTER-SALES SERVICE***

Please contact our local distributor first.

To find out about our local distributor, you can check our website :

[www.sic-marking.com](http://www.sic-marking.com)

If you can not reach our distributor, please call SIC MARKING at +33.4.72.54.80.00.

SIC MARKING or its distributor offer the following services :

### ***✓ Phone support***

Please do not hesitate to contact us for any technical problem.

### ***✓ On-site intervention***

We can help you install, set up the machine on-site, as well as repair it and provide personal training.

### ***✓ Maintenance contract***

Thanks to the maintenance contract, we provide regular maintenance of your marking machine.

### ***3. PREVENTIVE MAINTENANCE***

If you want to keep your machine in a good working condition, it is necessary to do the following actions :

- **clean** the stylus pin guide and the stylus assembly regularly
- **avoid** dust and abrasive particles on the guiding and driving elements

#### **How to clean the stylus pin guide and the stylus assembly**

- Unplug the marking machine
- Unscrew the stylus pin guide (see General layout of the stylus assembly in appendix)
- Remove the stylus, the spring and the core
- Clean all parts and remove the grease
- **Lubricate the stylus and the stylus pin guide using exclusively the oil supplied with your maintenance kit.**
- Reassemble the machine and **manually fasten the stylus pin guide**

**Note :** please pay attention to the direction when reassembling the core (see General layout of the stylus assembly in appendix)

## 4. TROUBLE SHOOTING

Problem	Check	Solution
The stylus assembly does not move on the X and Y axes	Check that : <ul style="list-style-type: none"> <li>- The controller is on</li> <li>- A marking program is loaded and the controller is in marking mode (see software manual)</li> <li>- The machine is correctly linked to the controller</li> <li>- The cable is in working condition</li> <li>- The control handbox is connected (except for gun marking machines)</li> <li>- The movements on the X and Y axes are not blocked when the machine is on.</li> </ul>	<ul style="list-style-type: none"> <li>- See controller manual</li> <li>- Load a program and set the machine in marking mode</li> <li>- Reposition the connectors</li> <li>- Open the connectors and check the wires either visually or with a ohmmeter.</li> <li>- Reposition the connectors</li> <li>- Remove any obstacle or clean the guiding rails and the driving mechanisms</li> </ul>
The marking head does not go back home before marking	Check that : <ul style="list-style-type: none"> <li>- The sensors cables are correctly connected and in good working condition</li> <li>- The origin sensors work properly (in home position, the red lights located on the sensors are off, otherwise they are on).</li> <li>- The driving belts are not broken on the integrated type or column type machines</li> </ul>	<ul style="list-style-type: none"> <li>- Reconnect the wires or replace the damaged cables</li> <li>- Replace the sensors</li> <li>- Replace the damaged belt</li> </ul>
The stylus assembly moves (X,Y) but the stylus does not	Check that : <ul style="list-style-type: none"> <li>- The stylus is not blocked by anything</li> <li>- The solenoid is in good working condition (no overheating, short circuit...)</li> </ul>	<ul style="list-style-type: none"> <li>- Disassemble the machine, clean it, lubricate it with the oil provided in your maintenance kit and re-assemble (see General layout in appendix)</li> <li>- Replace the solenoid</li> </ul>
The marking quality is terrible : <ul style="list-style-type: none"> <li>- The dots are not aligned</li> </ul>	Check that : <ul style="list-style-type: none"> <li>- The part is correctly maintained during the entire marking process and the machine is correctly fastened</li> <li>- The marking speed is not too high compared with the marking to be made (size)</li> <li>- There is no backlash in the X and Y axes</li> </ul>	<ul style="list-style-type: none"> <li>- Redo the marking after fastening the part and/or the machine properly</li> <li>- Reduce the marking speed</li> <li>- Please contact the after sales service</li> </ul>
<ul style="list-style-type: none"> <li>- The impacts are not regular</li> </ul>	<ul style="list-style-type: none"> <li>- The distance between the stylus and the part is correct</li> <li>- The stylus pin is in good working condition</li> <li>- The stylus can move correctly</li> <li>- There is no backlash between the stylus pin guide and the stylus</li> </ul>	<ul style="list-style-type: none"> <li>- Change the distance (see manual)</li> <li>- Replace the stylus</li> <li>- Clean the stylus pin guide and the stylus</li> <li>- Change the stylus pin guide</li> </ul>

If you have checked everything and the system still does not work, please contact our after sales services.

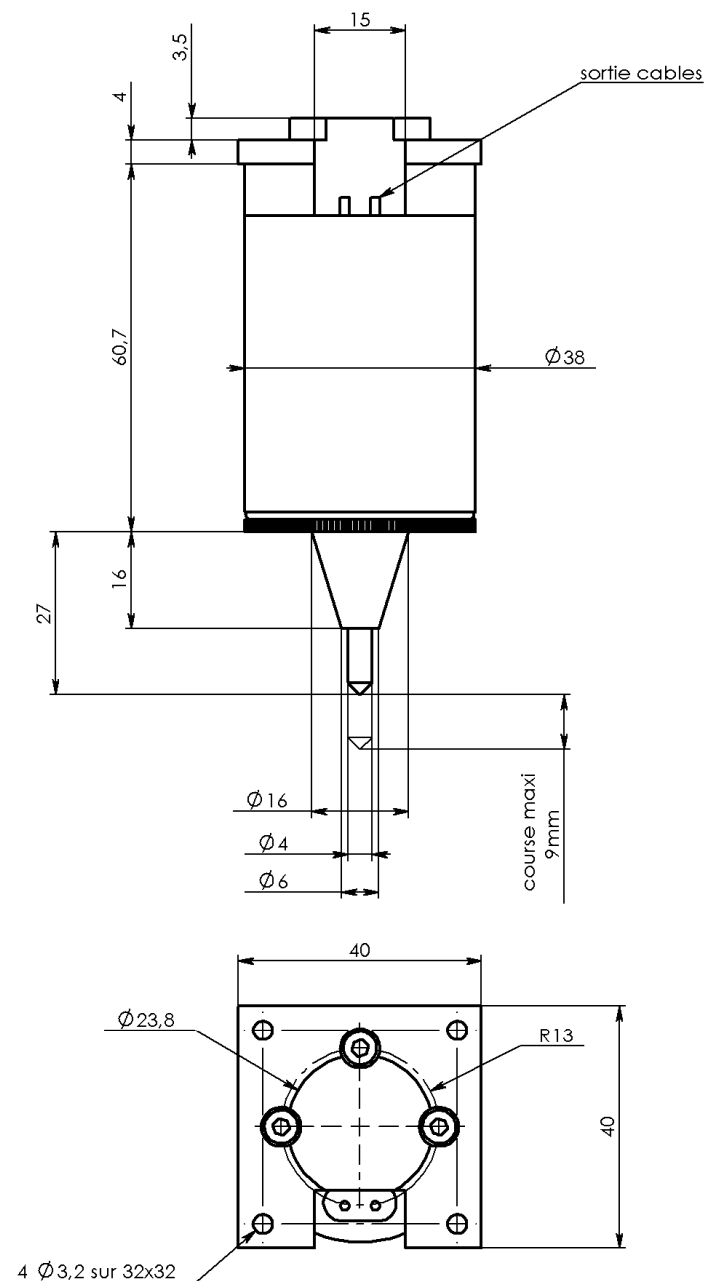




# APPENDIX

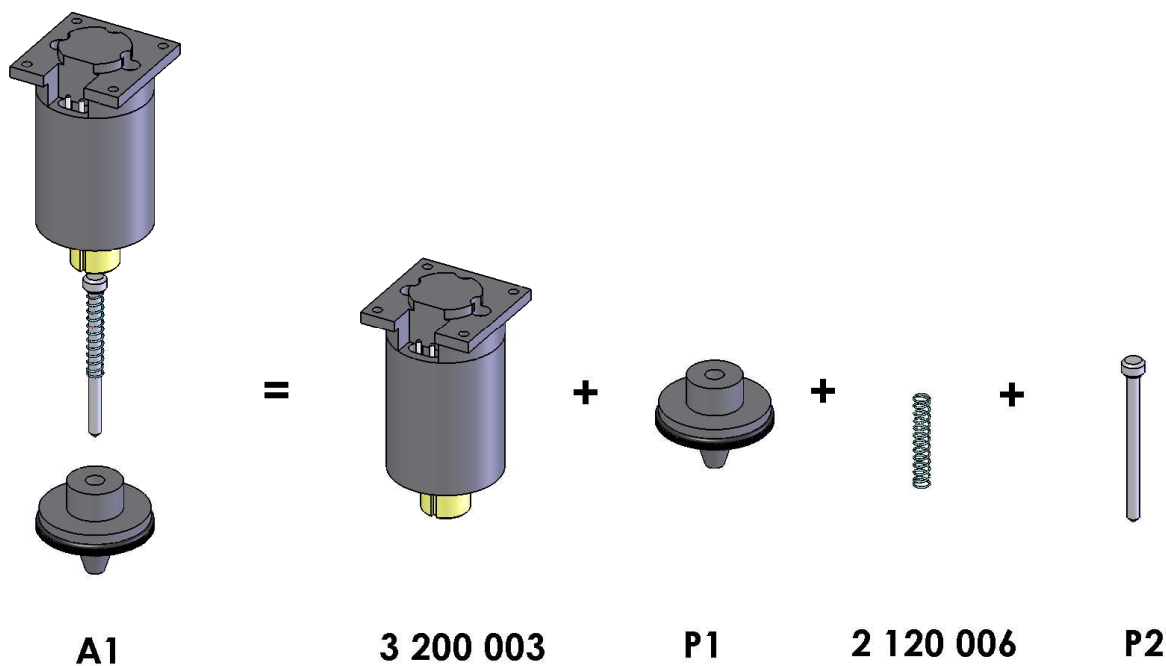
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# 1. ENSEMBLE PERCUTEUR





Traitement :	Finition :	Date : 11/09/06	Tol. gén :
<b>SIC MARKING</b> 13 route de Limonest 69380 LISSIEU Tél : 04 72 54 80 00 Fax : 04 78 47 39 40	Matière :	Dessiné par C.P	Ech : 1:1
	Fournisseur :	Référence :	
	Description : ensemble percuteur Lg 60		
N° :		Code article : 4 300 314	

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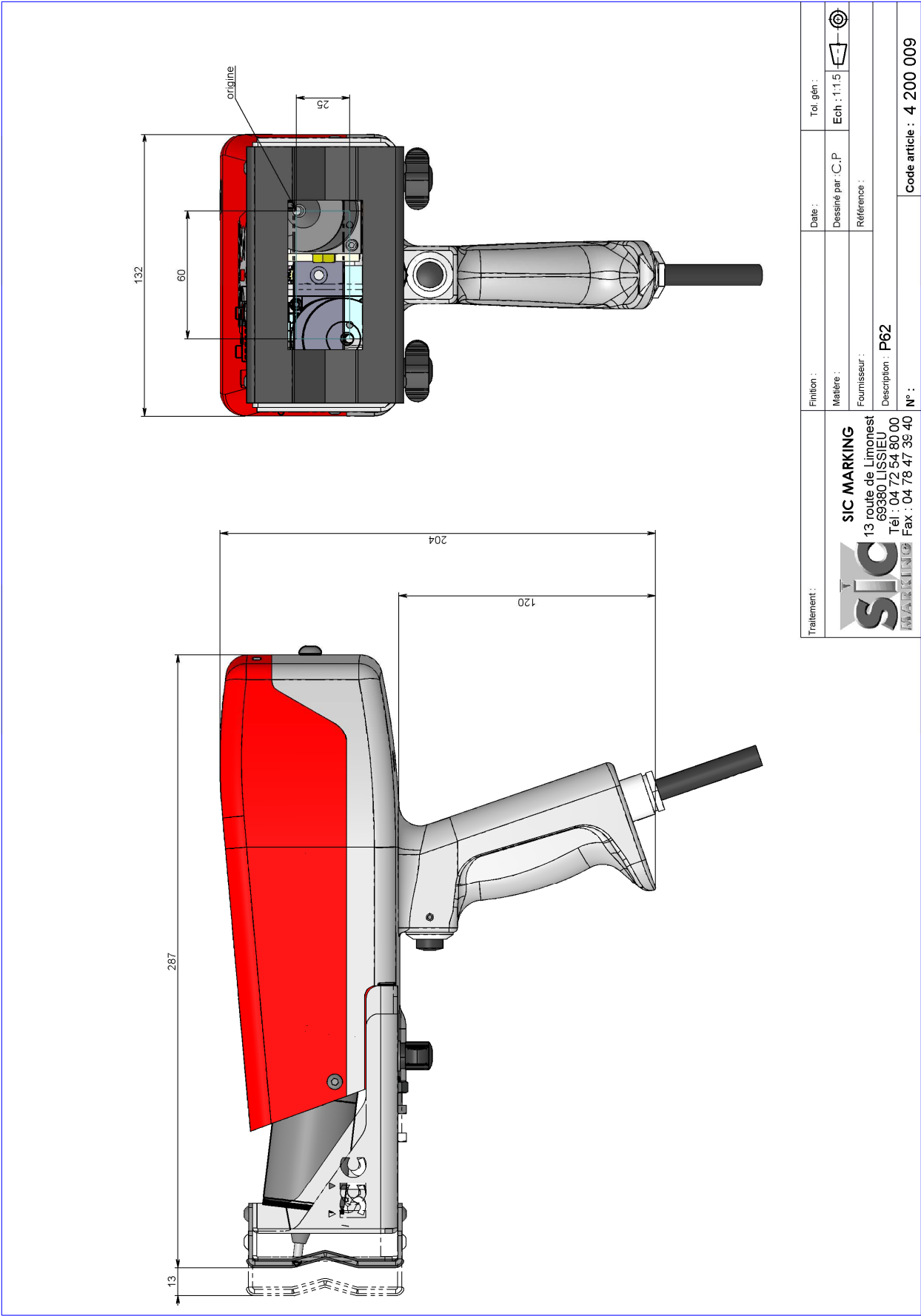


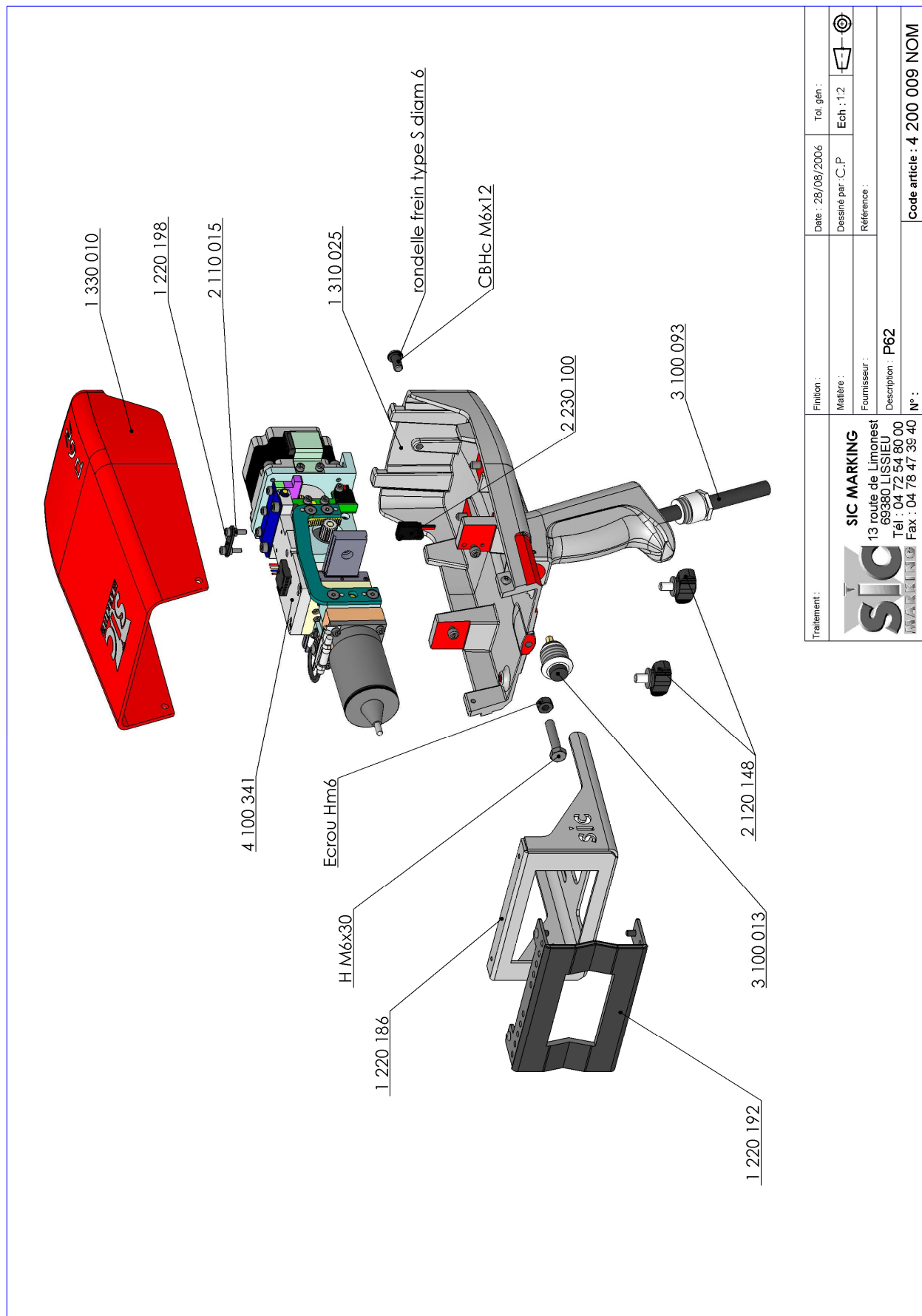
A1	P1	P2			
(A1 = 3200003 + P1 + 2120006 + P2)		code	lg	angle	type
4 300 314	1 120 017	1 120 012	60	90	
4 300 332		1 120 057	60	90	aéro
		1 120 109	60	120	
4 300 335		1 120 054	60	120	aéro
4 300 315	1 120 023	1 120 013	80	90	
4 300 333		1 120 058	80	90	aéro
		1 120 152	80	120	
4 300 336		1 120 055	80	120	aéro
4 300 316	1 120 024	1 120 014	100	90	
4 300 334		1 120 059	100	90	aéro
		1 120 153	100	120	
4 300 337		1 120 056	100	120	aéro

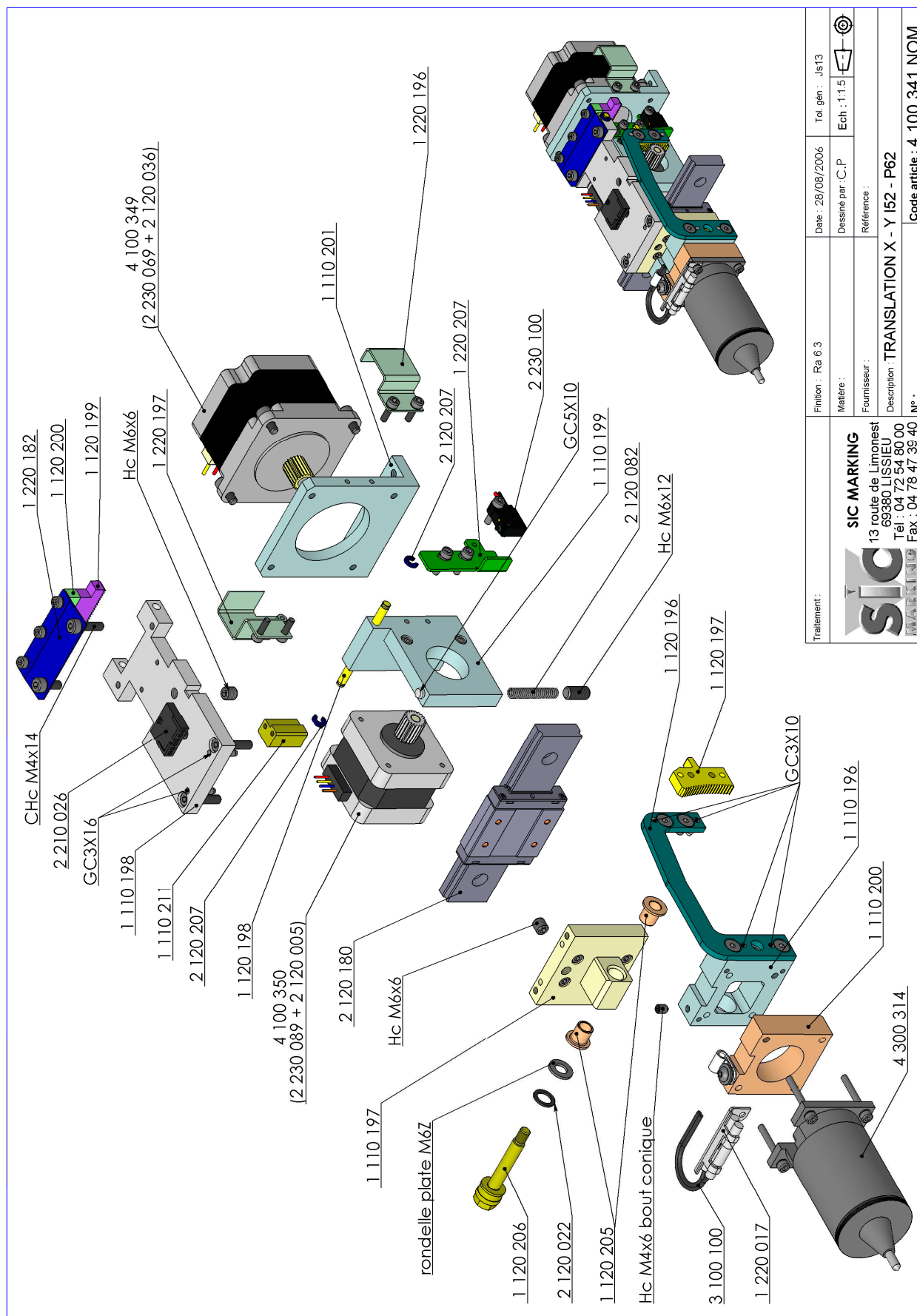
Traitement :	Finition :	Date : 22/05/2006	Tol. gén :
 <b>SIC MARKING</b> 13 route de Limonest 69380 LISSIEU Tél : 04 72 54 80 00 Fax : 04 78 47 39 40	Matière :	Dessiné par C.P	Ech : 1:2 
	Fournisseur :	Référence :	
	Description : NOMENCLATURE - OVERVIEW - 4 300 314		
	N° : 4 300 314 NOM		Code article :

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2. P62







Traitement :	Finition : Ra 6.3	Date : 28/08/2006	Tol. gén. : Js13
	Matière :	Dessiné par : C.P	Ech : 1:1.5
	Fournisseur :	Reference :	
Description : TRANSLATION X - Y I52 - P62			
N° : 4 100 341 NOM			

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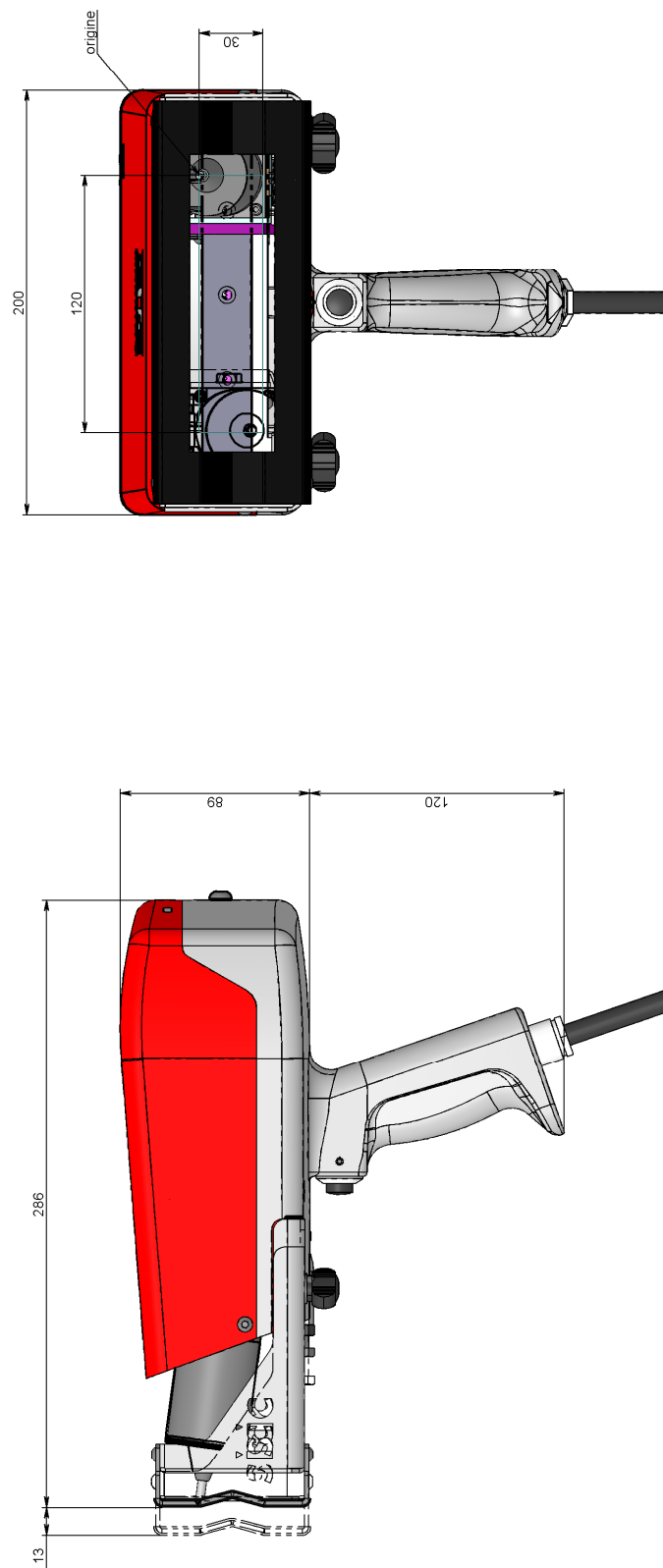
## 4 200 009

Quantité	Code
1	1 220 186
1	1 220 192
1	1 220 198
1	1 310 025
1	1 330 010
2	2 110 015
2	2 120 148
1	2 230 100
1	3 100 013
1	3 100 053
1	3 100 093
1	4 100 341

## 4 100 341

Quantité	Code
1	1 110 196
1	1 110 197
1	1 110 198
1	1 110 199
1	1 110 200
1	1 110 201
1	1 110 211
1	1 120 196
1	1 120 197
1	1 120 198
1	1 120 199
1	1 120 200
2	1 120 205
1	1 120 206
1	1 220 017
1	1 220 182
1	1 220 196
1	1 220 197
1	1 220 207
1	2 120 022
1	2 120 082
1	2 120 180
2	2 120 207
1	2 210 026
1	2 230 100
1	3 100 100
1	4 100 349
1	4 100 350
1	4 300 314
4	GC3X10
2	GC3X16
1	GC5X10

3. P122

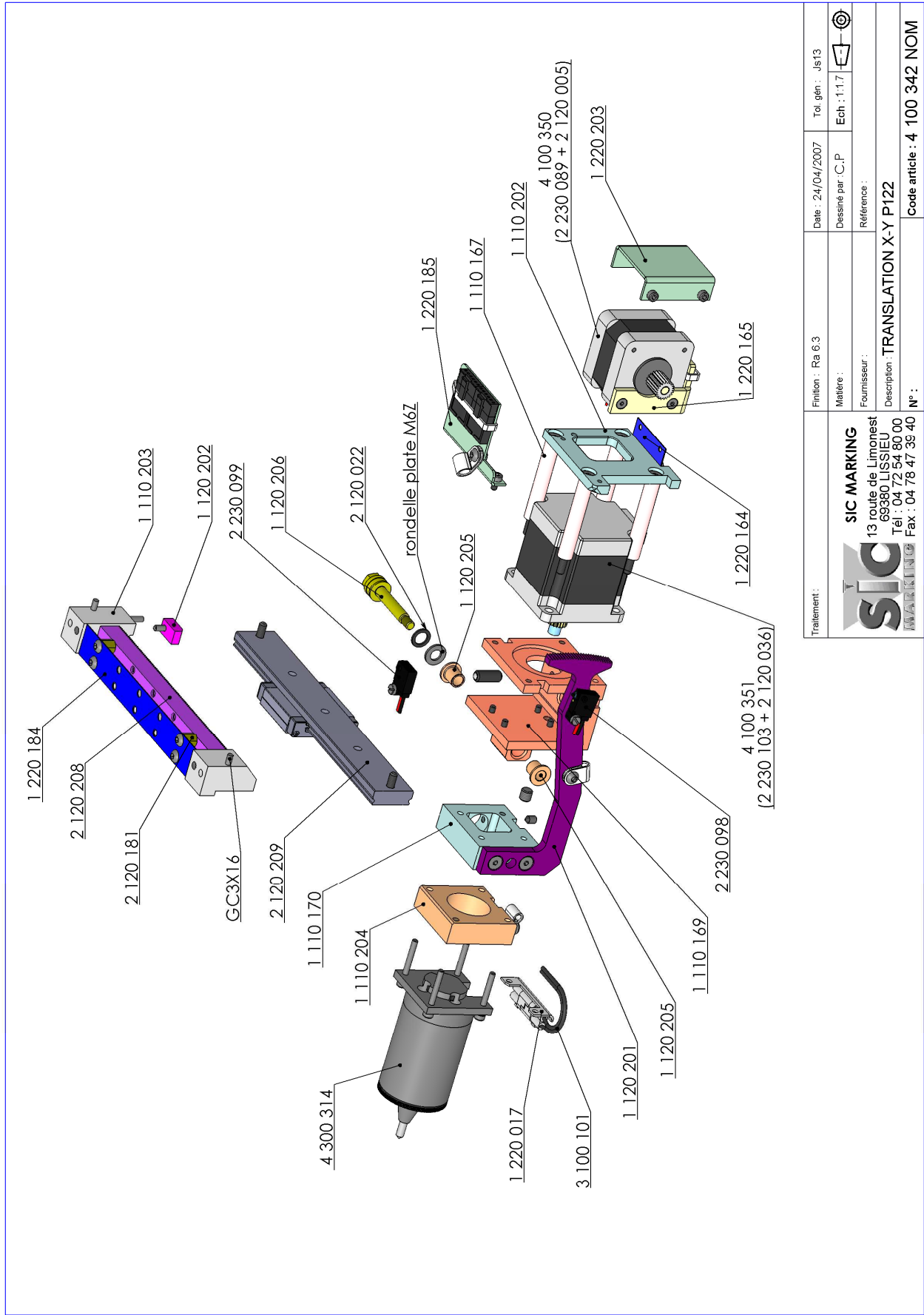


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	Matière :	Dessiné par : C.P	Ech : 1:2
	Fournisseur :	Référence :	
	Description : P122		
N° :			Code article : 4 200 007

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Traitement :	SIC MARKING			Finition : Ra 6.3	Date : 24/04/2007	Tol. gén. : Js13
	13 route de Limonest 69380 L'ISSEU Tél : 04 72 54 80 00 Fax : 04 78 47 39 40			Matière :	Dessiné par : C.P.	Ech : 1:1.7
				Fournisseur :	Référence :	
				Description : TRANSLATION X-Y P122		
	MARKING			N° :	Code article : 4 100 342 NOM	

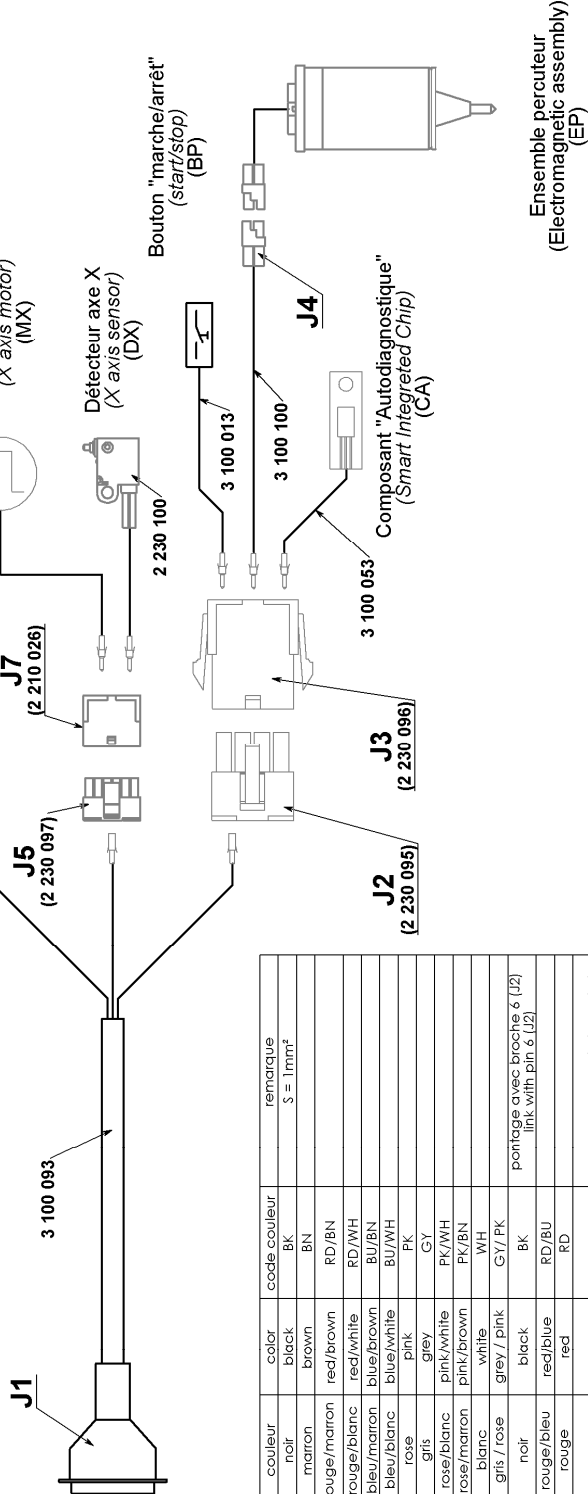
## 4 200 007

Quantité	Code
1	1 220 188
1	1 220 189
1	1 310 027
1	1 330 009
2	2 120 148
1	3 100 013
1	3 100 093
1	4 100 342

## 4 100 342

Quantité	Code
4	1 110 167
1	1 110 169
1	1 110 170
1	1 110 202
1	1 110 203
1	1 110 204
1	1 120 201
1	1 120 202
2	1 120 205
1	1 120 206
1	1 220 017
1	1 220 164
1	1 220 165
1	1 220 184
1	1 220 185
1	1 220 203
1	2 120 022
2	2 120 181
1	2 120 190
1	2 120 208
1	2 120 209
1	2 230 098
1	2 230 099
1	3 100 101
1	4 100 350
1	4 100 351
1	4 300 314

J3	J4	J7	J8	MX	DX	MY	DY	CA	EP	BP	couleur	color	code couleur	remarque
	X			X					X			red	RD	pas de polarité no polarity
		1		X							rouge	jaune	YE	
		2		X							orange	orange	OR	
		3		X							bleu	bleu	BU	
		4		X							rouge	rouge	RD	
		5		X							noir	black	BK	
		6		X							rouge	jaune	YE	
			1		X						orange	orange	OR	
			2		X						bleu	bleu	BU	
			3		X						rouge	rouge	RD	
			4		X						noir	black	BK	
			5		X						bleu	bleu	BU	
			6		X						noir	black	BK	
2								X			noir	black	BK	pas de polarité no polarity
6								X			noir	black	BK	pas de polarité no polarity
4									X		noir	black	BK	pas de polarité no polarity
7										X	noir	black	BK	pas de polarité no polarity
1	X										noir	black	BK	pas de polarité no polarity
5	X										noir	black	BK	pas de polarité no polarity



J1	J2	J5	J6	couleur	color	code couleur	remarque
1, 2, 14, 15	5			noir	black	BK	\$ = 1mm²
3	3			marron	brown	BN	
4		1		rouge/marron	red/brown	RD/BN	
5		2		rouge/blanc	red/white	RD/WH	
6		3		bleu/marron	blue/brown	BU/BN	
7		4		bleu/blanc	blue/white	BU/WH	
8		1		rose	pink	PK	
9		2		gris	grey	GY	
10		3		rose/blanc	pink/white	PK/WH	
11		4		rose/marron	pink/brown	PK/BN	
12				blanc	white	WH	
13		6		gris / rose	grey / pink	GY/PK	portage avec broche 6 (J2) link with pin 6 (J2)
16		7		noir	black	BK	
17		8		rouge/bleu	red/blue	RD/BU	
				rouge	red	RD	
18		6	6	bleu	blue	BU	portage entre 6 (J5) et 6 (J6) link between 6 (J5) and 6 (J6)
20			5	noir	black	BK	
21			5	violet	purple	VT	
22, 23, 24, 25	1			gris	grey	GY	\$ = 1mm²

code couleur selon IEC 60757

**SIC MARKING**  
13 route de Limonest  
69380 LISSIEU  
Tél : 04 72 54 80 00  
Fax : 04 78 47 39 40

Matière :   
 Dessiné par :   
 Ech : 2:1

Fournisseur :   
 Date : 22/05/2007

Description : **SCHEMA ELECTRIQUE - WIRING PLAN - P62**

N° : **4 200 009 SHE**   
 Folio : **1/1**

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